

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of : Gaddam et al.  
Serial No. : 10/806,737  
Confirmation No. : 2557  
Filing Date : March 23, 2004  
Group Art Unit : 2611  
Examiner : Kevin Kim  
Attorney Docket No. : US000214A

Date: May 16, 2008

**APPEAL BRIEF  
On Appeal from Group Art Unit 2611**

Responsive to the Notice of Appeal filed March 18, 2008, please consider to following:

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## **I. REAL PARTY IN INTEREST**

The real party in interest is Koninklijke Philips Electronics N.V., the assignee of record.

## **II. RELATED APPEALS AND INTERFERENCES**

Appellant is not aware of any pending appeals, judicial proceedings, or interferences which may be related to, directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

## **III. STATUS OF CLAIMS**

- a) Claims 15-24 are pending at the time of filing the appeal brief.
- b) Claims 1-14 are cancelled.
- c) Claims 1 and 23 are independent.
- d) Claims 15-21 and 23-24 stand rejected and are the subject of this appeal.
- e) Claim 22 is deemed allowable.

## **IV. STATUS OF AMENDMENTS**

The claims listed in section "VIII. Claims Appendix" of this Appeal Brief correspond to the claims as submitted in Appellant's amendment filed October 12, 2007. No claim amendments have been submitted following the amendment of October 12, 2007. These claim amendments were entered by the Examiner as indicated in the final Office Action of December 19, 2007.

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

The claimed invention, as recited in claim 15, is directed to a receiver (fig. 6) comprising: a trellis decoder that is configured to decode a first data stream and a second data stream (page 9, lines 8-17), wherein the trellis decoder decodes the first data stream based on a first symbol map and corresponding first metric table (page 9, lines 8-17), and the second data stream based on a second symbol map and corresponding second metric table (page 9, lines 8-17), wherein the second data map is configured to provide a higher gain to bits of the second data stream than the first data map provides to bits of the first data stream (page 4, line 5 to page 5, line 9; page 9, lines 8-17).

The claimed invention, as recited in claim 23, is directed to a receiver for selectively decoding a data stream in a first or a second decoding mode (fig. 3 (encoder) and fig. 6), the receiver comprising: a trellis decoder that is configured to: in the first decoding mode, decode a received symbol based on a first metric table corresponding to the inverse of a first map that provides the symbol mapping of the first mode (page 9, lines 13-17); and in the second decoding mode, decode a received symbol based on a second metric table corresponding to the inverse of a second map that provides the symbol mapping of the second mode (page 9, lines 15-17), wherein the second data map is configured to provide a higher gain than the first data map provides to bits of the first data stream (page 4, line 5 to page 5, line 9; page 9, lines 13-17).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Whether claims 15, 21, 23 and 24 are properly rejected under 35 U.S.C. 102(e) as being taught by Jafarkhani et al. (US 6,542,554, hereinafter Jafarkhani).

Whether claims 16, 18 and 19 are properly rejected under 35 U.S.C. 103(a) over Jafarkhani, in view of Limberg (US 5,805,241).

Whether claim 20 is properly rejected under 35 U.S.C. 103(a) over Jafarkhani and Limberg, in view of Klayman et al. (US 5,669,365).

## **VII. ARGUMENT**

Appellant respectfully traverses the rejections in accordance with the detailed arguments set forth below.

### **A. Claim 17 not listed in any rejection or given any status in the detailed rejection.**

Claim 17 is not listed in any of the rejections nor is it listed as allowable. This was pointed out to the Examiner in the response of October 12, 2007 but was not corrected in the final Office Action. It is noted that any rejection of claim 17 would make the finality of the Office Action of December 19, 2007 premature.

### **B. Claims 15, 21, 23 and 24 are not properly rejected under 35 U.S.C. 102(e) as being taught by Jafarkhani.**

In order for a reference to anticipate a claim the MPEP 2131 requires the reference to teach each and every element of that claim. It is respectfully submitted that the Examiner failed to establish a prima facie case of anticipation.

#### **1. Claim 15**

Appellant's claim 15 recites a receiver that includes "the second data map is configured to provide a higher gain to bits of the second data stream than the first data map provides to bits of the first data stream."

In the Office Action it is alleged that, while Jafarkhani does not teach the claimed features, for different encoding rates, different symbol maps and metric tables are required (emphasis added). However, Jafarkhani does not discuss symbol mapping at all. Jafarkhani shows the output bits for a particular state transition, but lacks any mention of mapping symbols. This is obviously important since the symbol map is constructed in such a way as to provide certain gain levels for the signals. However, nowhere is this disclosed or suggested in Jafarkhani.

Furthermore, the cited reference only suggests that a receiver may be adapted to decode any of the three rates described in Jafarkhani. There is no suggestion in Jafarkhani of the "requirement" alleged in the Office Action. The Examiner provides no reference or explanation of where such a requirement is gleaned from. Appellant disagrees and submits that there is no such "requirement," as different rates can be achieved by a number of methods, for example, by puncturing symbols (not suggested by the reference, just an example).

Thus, Jafarkhani fails to teach or even suggest each and every feature recited in appellant's claim 15, therefore, a *prima facie* case of anticipation has not been presented and the rejection should be reversed.

## **2. Claim 23**

Appellant's independent claim 23 is directed to a receiver for selectively decoding a data stream in a first or a second decoding mode. Claim 23 includes: "in the second decoding mode, decode a received symbol based on a second metric table corresponding to the inverse of a

second map that provides the symbol mapping of the second mode, wherein the second data map is configured to provide a higher gain than the first data map provides to bits of the first data stream.”

The Examiner rejects this claim using identical arguments as used in rejecting claim 15. Accordingly, appellant essentially repeats the above arguments from claim 15 pointing out why claim 23 cannot be anticipated by the cited reference. Appellant respectfully submits that claim 23 is allowable for at least the same reasons as discussed above and the rejection should be reversed.

### **3. Claims 21 and 24**

Claims 21 and 24 depend from claims 15 and 23 respectively. Each dependent claim includes all the limitations of either claim 15 or 23 and further distinguishing features. Accordingly, appellant essentially repeats the above arguments from claim 15 and respectfully submits that claims 21 and 24 are allowable by virtue of their dependency, as well as the additional subject matter recited therein and not shown or suggested by the cited reference, thus the rejection of these claims should be reversed.

### **C. Claims 16, 18 and 19 are not properly rejected under 35 U.S.C. 103(a) over Jafarkhani and Limberg.**

#### **1. Claims 16, 18 and 19**

MPEP 2142 states:

"To establish a *prima facie* case of obviousness ... the prior art reference (or references when combined) **must teach or suggest all the claim limitations**... If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness."

Appellant's dependent claims 16, 18 and 19 depend from claim 15. Each dependent claim includes all the limitations of claim 15 and further distinguishing features. For example

claim 16 recites: “a de-randomizer, operably coupled to the Reed-Solomon decoder, that reorders data from the Reed-Solomon decoder to provide packets corresponding to the first data stream and second data stream.”

Limberg fails to teach or suggest reorders data ... corresponding to the first data stream and second data stream. The Office Action points to col. 1, lines 32-36, however a review of the cited section finds no suggestion of the claimed features.

Furthermore, Limberg is apparently cited for showing the additional features recited in each of the dependent claims. However, Limberg fails to cure the deficiencies of Jafarkhani as related to the features of claim 15, as noted above in the discussion of claim 15.

Accordingly, appellant essentially repeats the above arguments from claim 15 and respectfully submits that claims 16, 18 and 19 are allowable by virtue of their dependency, as well as the additional subject matter recited therein and not shown in the combination of references, thus the rejection should be reversed.

**C. Claim 20 is not properly rejected under 35 U.S.C. 103(a) over Jafarkhani, Limberg and Klayman et al.**

Appellant’s claim 20 depends from claim 19, which depends from claim 15. Claim 20 includes all the features of claims 19 and 15 and further distinguishing features. Klayman et al. is apparently cited for showing the additional features recited in claim 20; however, Klayman et al. fails to cure the deficiencies of Jafarkhani and Limberg as noted above in the discussion of claims 19 and 15.

Accordingly, appellant essentially repeats the above arguments from claim 15 and respectfully submits that claim 20 is allowable by virtue of its dependency, as well as the

additional subject matter recited therein and not shown in the combination of references, thus the rejection should be reversed.

## **CONCLUSION**

In light of the above, appellant respectfully submits that the rejection of claims 15, 16, 18-21 and 23-24 is in error, legally and factually, and must be reversed.

Respectfully submitted,

Date: May 16, 2008

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### **VIII. CLAIMS APPENDIX**

1-14. (cancelled)

15.(original) A receiver comprising:

    a trellis decoder that is configured to decode a first data stream and a second data stream, wherein

        the trellis decoder decodes

        the first data stream based on a first symbol map and corresponding first metric table, and

        the second data stream based on a second symbol map and corresponding second metric table, wherein the second data map is configured to provide a higher gain to bits of the second data stream than the first data map provides to bits of the first data stream.

16.(original) The receiver of claim 15, further including:

    a de-interleaver, operably coupled to the trellis decoder, that reorders bytes from the trellis decoder,

    a Reed-Solomon decoder, operably coupled to the de-interleaver, that corrects errors among bytes from the de-interleaver, and

    a de-randomizer, operably coupled to the Reed-Solomon decoder, that reorders data from the Reed-Solomon decoder to provide packets corresponding to the first data stream and second data stream.

17.(original) The receiver of claim 16, further including

a multiplexer, operably coupled to the trellis decoder, that is configured to order the bytes of the first and second data stream for processing by the de-interleaver, wherein the multiplexer receives a control input that controls a selection of bytes corresponding to the first data stream or the second data stream.

18.(previously presented) The receiver of claim 16, wherein the receiver is configured to decode at least the first data stream in conformance with ATSC standards for the Vestigial Side Band subsystem of the Digital Transmission Standard for the transmission of digital television signals.

19.(original) The receiver of claim 15, further including a post processor that further decodes the second data stream via a subsequent error correcting process.

20. (original) The receiver of claim 19, wherein the post processor is enabled in dependence upon a control parameter in an MPEG header.

21.(previously presented) The receiver of claim 15, wherein the second data map is configured to minimize the effects of a symbol error.

22.(previously presented) The receiver of claim 15, wherein redundant encoded bits are encoded by applying a maximum mapping gain and non-redundantly encoded bits are encoded by applying a minimum mapping gain.

23.(previously presented) A receiver for selectively decoding a data stream in a first or a second decoding mode, the receiver comprising:

a trellis decoder that is configured to:

in the first decoding mode, decode a received symbol based on a first metric table corresponding to the inverse of a first map that provides the symbol mapping of the first mode; and

in the second decoding mode, decode a received symbol based on a second metric table corresponding to the inverse of a second map that provides the symbol mapping of the second mode, wherein

the second data map is configured to provide a higher gain than the first data map provides to bits of the first data stream.

24.(previously presented) The receiver of claim 23, wherein the second data map is further configured to minimize the effects of a symbol error.

## **IX. EVIDENCE APPENDIX**

No evidence has been submitted pursuant to §§ 1.130, 1.131, or 1.132 of this title nor any other evidence entered by the examiner and relied upon by appellant in the appeal.

## **X. RELATED PROCEEDINGS APPENDIX**

Appellant is not aware of any appeals or interferences related to the present application.